

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND**

WILLIAM LOCKWOOD

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Plaintiff

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v.

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Civil Action No. WMN-02-CV-2068

PACIFIC USA, LTD., et al.

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Defendants

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**PLAINTIFF'S MOTION TO PRECLUDE PROPOSED EXPERT TESTIMONY OF
ANDREW BLACKWOOD, Ph. D.**

William Lockwood, by his attorneys, Paul D. Bekman, Michael P. Smith, and Salsbury Clements Bekman Marder & Adkins, L.L.C., hereby moves to preclude the proposed expert testimony of Andrew Blackwood, Ph.D. for the reasons set forth in the accompanying memorandum.

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**PLAINTIFF'S MEMORANDUM IN SUPPORT OF HIS MOTION TO PRECLUDE
PROPOSED EXPERT TESTIMONY OF ANDREW BLACKWOOD, Ph. D.**

William Lockwood, by his attorneys, Paul D. Bekman, Michael P. Smith, and Salsbury Clements Bekman Marder & Adkins, L.L.C., hereby files this memorandum in support of his motion to preclude the proposed expert testimony of Andrew Blackwood, Ph.D.

BACKGROUND

This product liability case relates to a Pacific Cycle USA "Strike" mountain bike (the "Bicycle") manufactured by the Defendant, Pacific Cycle, L.L.C., ("Pacific Cycle") and sold to the Plaintiff William Lockwood by Defendant, Toys "R" Us - Delaware, Inc. ("Toys "R" Us"). The Plaintiff was severely injured when, while riding the Bicycle, the fork and front wheel separated from the rest of the Bicycle. The separation occurred at the point where the steer tube was inserted into the fork crown. The fork, an SR Duo Track 7006, was manufactured by the Third Party Defendant SR Suntour, Inc.

Suit was originally filed in the Circuit Court for Baltimore City in May of 2002, against Pacific Cycle and Toys "R" Us. Pacific Cycle timely removed the action to this Court. Several

months later, in December of 2002, Pacific Cycle filed a Third Party Complaint against SR Suntour, Inc. and SR Suntour, USA (collectively “Suntour”).

Discovery by Plaintiff and the Defendants on the claims asserted in the Complaint ended on January 31, 2003. Discovery on the Third Party Complaint was extended until April 20, 2003. During the discovery on the Third Party Complaint, Suntour identified Andrew Blackwood, Ph.D. as an expert and produced his report, attached as **Exhibit 1**, on April 15, 2003. Dr. Blackwood was deposed on April 16, 2003.¹ Based on the expert disclosures in discovery, Dr. Blackwood is not qualified to give his proposed opinions; nor are his opinions reliable. For these reasons, as set forth below, the Plaintiff requests that the Court preclude Dr. Blackwood from testifying as an expert at trial.

STATEMENT OF FACTS²

William purchased the Bicycle, a mountain bike, in May of 1997, at the Toys “R” Us store in Bel Air, Maryland. The Bicycle and its manual identify Pacific Cycle as the manufacturer. The front fork component of the Bicycle was manufactured by Suntour.

The fork, which was already incorporated into the Bicycle at the time of purchase, consists of two blades that extend down on either side of the front tire and meet the front wheel hub. The top portion of each blade is attached or joined to the fork crown which lies above the wheel. The front fork is connected to the head tube of the bicycle frame by the steer tube which, except for its

¹The relevant portions of Dr. Blackwood’s deposition testimony, as they relate to this motion, are attached as **Exhibit 2**.

²The materials and exhibits supporting the Statement of Facts have been previously produced as exhibits to Plaintiff’s Memorandum in Support of Motion for Partial Summary Judgment, filed on February 14, 2003, and to Plaintiff’s Reply to Defendants’ Opposition to Plaintiffs’ Motion for Partial Summary Judgment filed on March 28, 2003.

bottom portion, is totally inside the head tube. The bottom portion of the steer tube that extends out the lower end of the head tube is designed to go inside the fork crown where it is welded or otherwise bonded into place so that it does not separate from the fork crown.

On June 7, 1999, the steer tube separated from the fork crown while William was riding the Bicycle. When that separation occurred, he fell forward and down onto the roadway - face first. As a result, William sustained bilateral LeFort facial fractures as well as a complex mandibular symphyseal fractures with cortical bone loss and the loss of teeth nos. 8, 9, 22 - 27 (his upper and lower jaws were fractured, teeth broken or lost). His tongue was also sliced, and his nose was broken.

As shown by the expert reports produced by Plaintiff in discovery and attached as **Exhibit B, Exhibit C and Exhibit E** to Plaintiff's Memorandum in Support of Motion for Partial Summary Judgment, the Bicycle was inspected after the occurrence. Those inspections disclosed that the steer tube was not welded, chemically bonded into place or otherwise properly fastened to the fork crown. No safety device, i.e. redundancy, or retightening device existed to prevent the steer tube from pulling out of the fork crown when the tube-to-fork crown mechanical bond became loose or worn from normal use. These defects caused the steer tube to prematurely separate from the fork crown.

The Defense Expert

Pacific Cycle identified a single expert, David Mitchell, P.E., whose conclusions were not contrary to those of Plaintiff's experts. Mr. Mitchell offered the generalized opinion that the front fork of the Bicycle "was different than other Duo Track 7006 forks and that difference, in conjunction with the manner of use, directly led to the fork crown/steerer tube separation." See

Mitchell Report at 3, attached as **Exhibit F** to Plaintiff's Memorandum in Support of Motion for Partial Summary Judgment.

The Suntour Expert

Suntour named Andrew Blackwood, Ph.D., as an expert witness in this case. Dr. Blackwood's report was produced on April 15, 2003, and he was deposed on April 16, 2003. It is Dr. Blackwood's opinion that

The design used by SR Suntour for this particular crown fork assembly uses a steel steerer tube and a nonferrous fork crown; these components are joined together by a process described as thermal bonding. The record does not indicate precisely how this thermal bonding is accomplished in practice; it is assumed that the aluminum is heated and/or that the steel is cooled, but details are not available at this time. The resistance to relative motion between the steerer tube and the fork crown is aided by the presence of striations on the steer tube which effectively lock the steerer tube into place in the fork crown. The condition of the joint portion of the fork crown is consistent with loosening of the joint and repeated rotary motion of the steerer tube in the fork crown. By all indications, the separation of the steerer tube and the fork crown was a progressive event and not a sudden failure.

* * *

. . . After the bicycle left control of [the Defendants and Third Party Defendants], it was subjected to considerable abuse, and as a result of that abuse, the connection between the steerer tube and the fork crown separated, ultimately leading to the accident.

See Blackwood Report at 3-4.

ARGUMENT

(Standard of Review)

Rule 702 of the Federal Rules of Evidence controls whether Dr. Blackwood can offer expert testimony. That Rule provides:

If scientific, technical, or other specialized knowledge will the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

This Court is the Rule 702 gatekeeper for determining whether expert testimony by a witness is admissible. See Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 592-93, 113 S.Ct. 2786; 125 L. Ed. 2d 469 (1993); Cooper v. Smith & Nephew, Inc., F.3d 194, 199-200 (4th Cir. 2001); Schreve v. Sears & Roebuck Company, 166 F. Supp.2d 378, 391 (D. Md. 2001). The two preliminary questions to be answered are: is the expert qualified and, if so, is the opinion he or she proffers reliable. Kumho Tire Co. v. Carmichael, 526 U.S. 137, 150, 153, 119 S.Ct. 1167; 143 L. Ed. 2d 238 (1999). Both questions should be answered in the negative in determining the admissibility of Dr. Blackwood's expert testimony.

I. Doctor Blackwood is Not Qualified To Testify As An Expert On the Cause of the Failure of the Bond Between the Steer Tube and the Fork Crown.

Whether an individual is qualified as an expert is a case specific inquiry. There is a vast range both of experts and of expertise. Merely because a proposed witness may testify as an expert in one area does not of itself qualify that witness to testify as an expert in a related area. See Schreve, 166 F. Supp.2d at 391 (citing cases). Accordingly, an expert who is a metallurgical engineer or a materials engineer, such as Dr. Blackwood, is not necessarily qualified to testify as

an expert on any issue touching those respective fields. Id. at 392. He must bring “some special “skill, knowledge or experience” to the courtroom in order to qualify. Id., quoting, Ancho v. Petek Corp., 157 F.3d 512, 517 (7th Cir. 1998).

As stated by Judge Davis in Schreve,

While the fit between an expert’s specialized knowledge and experience and the issues before the court need not be exact,. . . an expert’s opinion is helpful to the trier of fact, and therefore relevant under Rule 702, “only to the extent the expert draws on some special skill, knowledge or experience to formulate that opinion; the opinion must be an expert opinion (that is, an opinion informed by the witnesses’ expertise) rather than simply an opinion broached by a purported expert.”

166 F. Supp.2d at 392-93, quoting, Ancho, 157 F.3d at 517 - 18.

Suntour seeks to have Dr. Blackwood testify as an expert as to the appropriateness of the bond between the steer tube and the fork crown and as to the cause of the separation of the steer tube from the fork crown. Doctor Blackwood, however, lacks the special skill, knowledge or experience in the manufacturing or design of mountain bikes or their components, as well as on interference fits, on which he can draw to formulate his opinions in this case. Although his curriculum vitae may generally show him to be an expert in many things, he does not qualify as an expert to testify on the cause of the failure of a bicycle component.

Doctor Blackwood has no training or professional experience in bicycle design or manufacturing generally. See Blackwood Depo. at 7. He has no training or experience in the design or manufacturing of bicycle forks specifically. Id. at 8. He does not read bicycle design literature. Id. at 11. He does not know what force is necessary to break the bond between the steer tube and the fork crown. Id. at 31-32. He is not familiar with the applicable industry standards, and his sole exposure to the specific type of fork at issue in this case is the one hour he

spent in April of 2003, at the office of Plaintiff's counsel observing the Bicycle. Id. at 8, 35, and 40-41.

Based on something he recalls in the record but cannot point to, he understands that the two components were joined together through thermal bonding to form an interference fit. Id. at 37, 56-57. He has no experience, however, with interference fits of similar materials.³ Id. at 58-59. Nor does he ever recall performing a failure analysis on an interference fit. Id. at 59.

Suntour's expert disclosures reveal that Dr. Blackwood is an experienced expert witness. His resume contains pages of cases in which he testified as an expert since 1990. During that time, he testified in only one bicycle case, a case involving the failure of a bicycle handlebar. The vast majority of the cases concern failures relating to different materials and components: failure of fiber-reinforced composite model airplane propeller; failure of rubber hose; failure of turnbuckle from tree stand, failure of articulated ladder; failure of copper alloy valve housing; failure of conductor wire in brain electrode assembly; failure of dock leveler mechanism; failure of printing cartons; failure of knife blade; failure of furnace heat exchanger; failure of wood stepladder, failure of mandibular implant; and failure of polyethylene sprayer tank. See Blackwood Resume, at 4 - 7, attached as **Exhibit 3**.

Although it is true that Dr. Blackwood's engineering and forensic background might very well allow him to learn faster than others, particularly jurors, about the design and manufacture of bicycle forks, as an expert he must have that specific knowledge, not the capacity to acquire it.

³When asked specifically if he had "any experience in interference fits," Dr. Blackwood said: "[o]nly in the sense that if you try to put a large object into a small hole, it doesn't work very well, and it creates - - yeah, it creates interference. But in terms of executing them in practice or something of the sort, no." Blackwood Depo at 58-59.

See Schreve, 166 F.Supp.2d at 394. Because he lacks that specific knowledge, this Court should preclude Suntour from calling Dr. Blackwood as an expert in this case.

II. Doctor Blackwood's Opinions Are Not the Product of Reliable Principles and Methods and Are Not Based Upon Sufficient Facts and Data.

The methodology that Dr. Blackwood followed to arrive at his opinions is not particularly clear. He performed a failure analysis. See Blackwood Depo. at 26. The aim of a failure analysis of a broken part or component is to determine the cause of the failure. Id. at 14. According to his deposition testimony, there is no generally accepted method of performing a failure analysis. Id. at 12-13. "We design the protocol for the experiment, for the specific component."⁴ Id. at 13. Upon completion of the analysis one may conclude that the cause of the failure was material selection, the processing of the materials, the design of the component, or the use of the component outside its normal and expected use. Id. at 14-15.

In this case, no protocol was designed. Dr. Blackwood's failure analysis consisted of a one hour observation of the Bicycle, a review of photographs taken of the Bicycle after the separation but before his review, and a review of depositions, the expert reports, and the document production. Id. at 18-21. After reviewing the discovery materials, he concluded that the component, the Suntour fork, failed due to misuse or "considerable abuse." See Blackwood Report at 4, 5.

⁴No destructive testing is done unless there is agreement to the contrary. See Blackwood Depo. at 13.

Prior to reaching his opinion, Dr. Blackwood did not review any technical literature or engineering literature. Id. at 24. He did not perform any microscopic testing or analysis. Id. at 24-25. Nor did he test what in essence was his hypothesis of the cause of the separation.

Doctor Blackwood carried out his failure analysis and arrived at his opinions with the understanding that a mountain bicycle is used for off-road riding on dirt, hilly, rocky, terrain, going uphill and downhill; that it is distinguished from a number of other types of bicycles by being particularly designed for stability in off-road situations; and that it can also be used on city roads and sidewalks. Id. at 26-27. While doing the failure analysis, Dr. Blackwood also understood that the purpose of the front fork in a mountain bike is to connect the front wheel to the steering mechanism and through the steering mechanism to the frame of the bicycle; and that the front fork is a critical component in the sense that component failure at any point on the fork is likely to render the bicycle not only not useful, but quite dangerous if someone is riding it at the moment of failure.⁵ Id. at 30.

Doctor Blackwood does not know how steer tubes and fork crowns are bonded in forks made by other manufacturers. Id. at 65. He has no specific knowledge of Suntour forks, their design or manufacture.⁶ Id. at 30. He only understands from some unidentified source that the assembly process is something called thermal bonding, but he does not know what that means, or how it was accomplished in this instance. Id. at 37, 56-57.

⁵Doctor Blackwood admits that a bicycle is unreasonably dangerous if the steer tube separates from the fork crown under normal and expected use. See Blackwood Depo., at 33-34.

⁶He also does not know who designed the bicycle based on the record. Id. at 53-54. He does not know who assembled the portions of the fork. Id. at 54-55. He does not know who created the bond between the steer tube and the fork crown. Id. at 55.

It is his understanding, based on his general knowledge, that thermal bonding creates an “interference fit.” Id. Doctor Blackwood, however, has no experience with interference fits, such as exists in this case.⁷ Id. at 58-59. He has no recall of ever performing a failures analysis on an interference fit that failed. Id. at 59. He did not perform any tests in this case to determine what forces are applied to the front fork of a mountain bike when a person performs a bunny hop, or what forces are necessary to destroy an interference fit between a steel steer tube and a non-ferrous fork crown. Id. at 31-32.

When he observed the Bicycle, he saw what he describes as heavy use at the end of the handle bars. Id. at 43. He saw a mark on the inside of the frame where the rear wheel would travel which indicated to him prolonged contact, probably with the wheel. Id. at 44. He observed bangs and dings on the frame. Id. He does not know, however, how or when these various, observed markings were made. Id. at 46-47.

Based on this failure analysis, it is Dr. Blackwood’s opinion that the bond created by the interference fit between the steer tube and the fork crown loosened over time.⁸ He presumes that repeated impacts of some sort caused the loosened fit. Id. at 60. In his Report, he says that the Bicycle “was subjected to considerable abuse, and as a result of that abuse, the connection between the steerer tube and the fork crown separated, ultimately leading to the accident.” See Blackwood Report at 4. When asked for the factual basis for his opinions that there was

⁷He is familiar with interference fits created by using a hammer. Id. at 59.

⁸Doctor Blackwood arrived at this conclusion based on the marking to and the condition of the area of the bond between the steer tube and the fork crown. Accordingly, he believes that the bond between the steer tube and the fork crown more likely than not failed prior to the day of the accident.

“considerable abuse,” and that the “abuse” caused the separation of the connection between the steerer tube and the fork crown, Dr. Blackwood was unable to point to anything other than his observations of the Bicycle. Indeed, he concedes

I think that the evidence of the record, absent the bicycle, is a record of no abusive use of the bicycle. The evidence of the bicycle is that there is evidence of abuse in the bicycle itself. I can't point to anything in the record beyond the photographic documentation of some of that abuse that would support the argument that there was abuse.

See Blackwood Depo. at 63.

Doctor Blackwood claims to find support for his assumed abuse in the deposition testimony of Jessie Wolcott, a youth who rode together with William over a two year period and who witnessed the separation in this case.

Q. Is there anything that you can point me to in any of the deposition testimony - - for instance, of Mr. Lockwood or Mr. Wolcott or Ms. Saunders - - that indicates any use of the bicycle that resulted or could have caused the loosening of this interference fit?

A. Well, Mr. Wolcott certainly describes attempts to use the bicycle for stunts for which it was not designed.

See Blackwood Depo. at 60 - 61.

Not surprisingly Dr. Blackwood was unable to show where Mr. Wolcott ever so testified, because Mr. Wolcott testimony was that William or “Bill” never performed stunts and indeed a mountain bike was simply too heavy to perform stunts.

Q. Okay. How about with the bikes, what did you see Bill do with the bikes as far as tricks?

A. Bill didn't really use his bike. I explained on the phone to you, I know, he had a mountain bike and you can't really do anything with it because it's so heavy. And he had a mountain bike with front shocks which makes it even worse because those things weigh a ton. So the most he could

do was do a little bunny hop or do a wheelie or ride off a curb. And not even a big wheelie because you can't get the bike up, it's too big.

Now I had the trick bike and I was doing all the crazy stuff while he was riding along.

See Deposition of Jessie Wolcott at 31 - 32 (**Exhibit 4**).

The proposed expert testimony of Dr. Blackwood is further unreliable because he is unable to say whether the failure of the bond between the steer tube and the fork crown occurred before or after the alleged abuse.

Q. Do you know how soon prior to the date of the accident the joint between the steer tube and the fork crown had failed to the point where the steerer tube was able to move within the fork crown?

A. No, I do not.

Q. Do you know if that joint failed before or after any of the abuse - - your word - - of the bicycle as evidenced by the end of the handlebars or the bend on the wheel or the dings on the frame?

* * *

A. No, I don't know.

See Blackwood Depo. at 65 - 66. Testimony that "abuse" caused the failure in the bond is certainly not reliable if the expert is unable to say that the abuse predated the failure.

In sum, aside from Dr. Blackwood drawing on his own experience when reviewing the discovery materials in this case, his method of failure analysis is totally lacking in independent research or testing. Nothing shows that his opinions are the product of reliable principles and methods and are based upon sufficient facts or data. See Beryln, Inc. v. Gazette Newspapers, Inc. 214 F. Supp. 530, 539 (D. Md. 2002).

Despite admitting that he does not know what forces are necessary to destroy an interference fit between a steel steer tube and a non-ferrous fork crown, that he does not know what forces were applied to the fork assembly by the assumed abuse in this case, and that he does not know when the assumed abuse occurred, Dr. Blackwood never tested his supposition that the assumed conduct he characterizes as “abuse” was even capable of destroying the interference fit. Without any such testing or other factual basis sufficient to show that the assumed abuse could have caused the failure of the interference fit, Dr. Blackwood’s testimony is nothing more than mere speculation. See Daubert, 509 U.S. at 590 (gate keeping function ensures that expert testimony is more than mere speculation). Doctor Blackwood’s speculative opinions are simply not reliable, and he should be precluded from offering them in this case.

CONCLUSION

Suntour should be precluded from calling Dr. Blackwood as an expert in this case. He is not qualified to offer opinions regarding the cause of the separation of the steer tube and fork crown. In addition, the opinions that he proposes are not reliable and are thus inadmissible under Fed. R. Evid. 702.

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 15th day of May 2003, copies of the foregoing Plaintiff's Motion to Preclude Proposed Expert Testimony of Andrew Blackwood, Ph.D., and Memorandum in Support, were forwarded electronically to the following:

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